MEMO FROM
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STANFORD, CALIFORNIA

TO: Jastrow
NASA

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Dear Bob:

Enclosed a fresh copy of this fantasy about a 'crystalline plasma'. Don't let this name mislead you-- I have in mind simply sheets of ions of opposite charge but equal mass so they can be accelerated by a full-wave linear accelerator.

The big problem is, of course, generating the ions, especially the negatively charged ones. However, these are recorded in mass spectrography though they are much less studied than the cations. One thought I had was to mix a vapor like NH_4F with another much heavier vapor under pressure to act as a polarizing dielectric -- a molecular sieve could then let out such NH_4^+ and F^- as are formed. Alternatively, even NH_3 itself might do this, but I don't see a way to retain the NH_3 as a 'solvent' gas, above its critical temperature, while harvesting the ions. Some elaborate scheme might be devised of condensing out the NH_3 from a solution of NH_4F in which the ions have been boiled out. My main thought was that if there were any intrinsic merit in structuring the plasma it might motivate some additional work needed to find ways to generate these particular ions.

Yours,